AD-A037 941 ARMY ELECTRONICS COMMAND WHITE SANDS MISSILE RANGE N--ETC F/G 4/2
12817C LANCE MISSILE NUMBER 2162, ROUND NUMBER 291 ECT, (15 OCT--ETC(U)
OCT 76

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October 1976

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METEOROLOGICAL DATA REPORT

12817C LANCE
MISSILE NO. 2162, ROUND NO. 291 ECT
(15 October 1976)

BY

WSMR METEOROLOGICAL TEAM

ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

ECOM
UNITED STATES ARMY ELECTRONICS COMMAND

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UNCLASSIFIED

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1. Ballistics
2. Meteorology
3. Winds

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

Meteorological data gathered for the launching of 12817C Lance, Missile Number 2162, Round Number 291 ECT, are presented in tabular form.

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UNCLASSIFIED

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CONTENTS

INTRODUCTION

12817C Lance, Missile Number 2162, Round Number 291 ECT, was launched from Red Rio, White Sands Missile Range (WSMR), New Mexico, at 0820 HRS MDT, 15 October 1976. The scheduled launch time was 0815 HRS MDT.

DISCUSSION

Meteorological data were recorded and reduced by the WSMR Meteorological Team, Atmospheric Sciences Laboratory (ASL), WSMR, New Mexico. The data are presented in the following tabulations.

ELEVATION	6,333.83	FEET/MSL
PRESSURE	807.3	MBS
TEMPERATURE	8.8	°C
RELATIVE HUMIDITY	96	%
DEW POINT	8.2	°C
DENSITY	992.0	GM/M^3
WIND SPEED	06	MPH
WIND DIRECTION	045	DEGREES
CLOUD COVER	6	Ac

TABLE I. SURFACE OBSERVATIONS TAKEN AT RED RIO, 0820 HRS MDT/15 OCTOBER 1976.

T-TIME (MIN-SEC)	SPEED (MPH)	DIR DEG
-0.30	5.0	062
-0.20	7.0	059
-0.10	7.0	046
0.00	5.0	045

TABLE II. ANEMOMETER-MEASURED WIND SPEED AND DIRECTION, POLE NO. 1 12817C LANCE, MISSILE NO. 2162, ROUND NO. 291 ECT LAUNCHED FROM RED RIO, 0823 MDT/15 OCTOBER 1976

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
SUR	060	2.0
100	234	
200	235	
300	239	
400	180	2.0
500	180	3.0
600	207	3.0
700	188	4.0
800	193	2.0
900	213	4.0
1000	192	1.0
1100	012	2.0
1200	327	4.0
1300	342	4.5
1400	343	5.0
1500	342	5.0
1600	348	6.0
1700	347	6.0
1800	359	7.0
1900	010	6.0
2000	028	5.5

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
2100	005	6.0
2200	353	3.0
2300	013	6.0
2400	005	6.0
2500	355	9.0
2600	003	9.0
2700	002	9.0
2800	355	13.0
2900	002	13.5
3000	018	12.0
3100	025	9.0
3200	021	12.0
3300	025	15.0
3400	032	15.0
3500	026	16.0
3600	013	18.0
3700	012	22.0
3800	019	19.0
3900	027	21.0
4000	041	21.0
4100	043	24.0

TABLE III. PILOT-BALLOON-MEASURED WIND DATA, RELEASE NO. 1
RELEASED FROM RED RIO, AT 0736 MDT/15 OCTOBER 1976
12817C LANCE, MISSILE NO. 2162, ROUND NO. 291 ECI

PIBAL RELEASE POINT WSTM COORDINATES:

X = 525,550.72 Y = 686,348.91 Z = 6,333.83

APPROXIMATELY: 1/4 MILE SOUTH OF LAUNCHER.

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
4200	041	24.0
4300	041	24.0
4400	046	21.0
4500	046	21.0
4600	043	23.0
4700	048	22.0
4800	049	25.0
4900	045	28.0
5000	045	30.0
5100	046	27.0
5200	048	24.0
5300	043	23.0
5400	049	24.0
5500	056	22.0
5600	047	26.0
5700	051	23.0
5800	048	24.0
5900	052	22.0

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
6000	053	19.0
6100	061	16.0
6200	058	14.0
6300	063	16.0
6400	056	20.0
6500	052	19.0
6600	057	20.0
6700	055	18.0
6800	056	17.0
6900	056	17.0
7000	057	17.0
7100	063	19.0
7200	066	17.0
7300	046	18.0
7400	051	16.0
7500	055	17.0
7600	059	19.0

TABLE III. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
SUR		CALM
100	030	2.0
200	045	3.0
300	066	6.0
400	070	9.0
500	071	8.0
600	084	5.0
700	094	4.0
800	090	3.0
900	060	7.0
1000	077	6.0
1100	071	7.0
1200	048	12.0
1300	034	11.0
1400	017	9.0
1500	008	8.0
1600	351	6.0
1700	338	7.0
1800	334	8.0
1900	352	7.0
2000	001	9.0

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
2100	004	11.0
2200	014	10.0
2300	029	11.0
2400	029	12.0
2500	028	16.0
2600	032	17.0
2700	027	19.0
2800	027	21.0
2900	035	20.0
3000	035	23.0
3100	036	22.0
3200	029	21.0
3300	026	24.0
3400	023	21.0
3500	028	25.0
3600	026	24.0
3700	031	22.0
3800	034	23.0
3900	036	24.0
4000	039	20.0
4100	036	21.0

TABLE IV. PILOT-BALLOON-MEASURED WIND DATA, RELEASE NO. 2
RELEASED FROM RED RIO, AT 0820 MDT/15 OCTOBER 1976
12817C LANCE, MISSILE NO. 2162, ROUND NO. 291 ECT

PIBAL RELEASE POINT WSTM COORDINATES:

X = 525,550.72 Y = 686,348.91 Z = 6,333.83

APPROXIMATELY: 1/4 MILE SOUTH OF LAUNCHER.

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
4200	037	22.0
4300	039	23.0
4400	045	22.0
4500	042	22.0
4600	045	23.0
4700	045	22.0
4800	050	21.0
4900	055	21.0
5000	056	21.0
5100	052	20.0
5200	049	19.0
5300	051	19.0
5400	056	18.0
5500	063	18.0
5600	061	18.0
5700	069	17.0
5800	075	17.0
5900	071	16.0
6000	072	17.0
6100	070	17.0
6200	069	16.0
6300	062	14.0
6400	076	16.0
6500	078	15.0

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
6600	080	14.0
6700	073	13.0
6800	070	12.0
6900	068	11.0
7000	072	12.0
7100	072	12.0
7200	066	14.0
7300	073	12.0
7400	073	13.0
7500	069	13.0
7600	078	11.0
7700	068	11.0
7800	075	14.0
7900	078	13.0
8000	073	9.0
8100	073	8.0
8200	072	11.0
8300	076	12.0
8400	078	11.0
8500	070	11.0
8600	077	12.0
8700	076	10.0
8800	080	10.0
8900	062	8.0

TABLE IV. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
9000	061	8.0
9100	063	8.0
9200	054	8.0
9300	050	9.0
9400	047	10.0
9500	070	10.0
9600	067	12.0
9700	087	10.0
9800	088	9.0
9900	090	9.0
10000	079	11.0
10100	071	12.0
10200	070	14.0
10300	067	16.0
10400	064	18.0
10500	063	20.0

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
10600	063	21.0
10700	061	23.0
10800	059	24.0
10900	058	24.0
11000	055	25.0
11100	052	25.0
11200	051	25.0
11300	050	25.0
11400	050	26.0
11500	049	27.0
11600	049	28.0
11700	048	28.0
11800	048	27.0
11900	049	27.0
12000	049	26.0

TABLE IV. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

STATION ALTITUDE 4051.00 FEET MSL
15 OCT. 70 0805 HRS MDT
ACCESSION NO. 715

SIGNIFICANT LEVEL DATA
7890CT0315
JALLEN

WSTM SITE COORDINATES
450491.80 FEET E
464023.05 FEET N

TABLE V

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT
874.3	4051.0	8.4	5.9	84.0
863.0	4404.6	8.6	2.6	66.0
850.0	4817.3	8.5	4.3	76.0
840.0	5130.1	8.6	5.2	79.0
826.0	5289.2	9.6	5.0	77.0
772.0	7436.6	8.0	-.5	55.0
700.0	10074.3	4.4	-5.4	49.0
660.0	11638.2	.6	-7.6	54.0
608.0	13782.3	-5.0	-8.6	76.0
567.0	15573.4	-9.1	-15.8	58.0
537.0	16947.7	-12.6	-18.7	71.0
525.0	17513.7	-14.0	-19.7	62.0
518.0	17840.3	-13.3	-32.5	18.0
500.0	18733.4	-14.0	-31.5	21.0
429.0	22464.5	-22.4	-37.0	25.0
400.0	24168.8	-27.4	-39.6	20.0
356.0	26993.7	-33.6	-44.2	23.0
325.0	28980.1	-37.5	-49.8	26.0
300.0	30788.0	-40.2		
278.0	32482.3	-44.6		
258.0	34120.2	-44.2		
250.0	34823.5	-45.0		
228.0	37412.7	-49.3		
211.0	38510.1	-49.2		
200.0	39853.7	-50.4		
150.0	45745.8	-57.7		
142.0	46885.8	-57.8		
118.0	50691.0	-53.9		
107.0	53419.2	-55.4		
100.0	54014.7	-63.9		

STATION ALTITUDE 4051.00 FEET MSL
15 OCT. 78 0805 HRS MDT
ASCENSION NO. 315

SIGNIFICANT LEVEL DATA
23000315
JALLEN

TABLE V (CONT)

WSTM SITE COORDINATES
455491.60 FEET E
464023.05 FEET N

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT
80.0	5848.5	-07.6		
70.0	61152.7	-55.5		
60.0	64963.0	-51.9		
50.0	67994.3	-52.4		
40.0	73666.1	-56.7		
30.0	78622.8	-56.4		
24.0	83380.8	-49.5		
20.0	87332.8	-49.3		
16.5	94313.8	-49.1		

UPPER AIR DATA
289C030315
JALLEN

STATION ALTITUDE 4051.00 FEET MSL
15 OCT. 76 0805 HRS MDT
ASCENSION NO. 315

TABLE VI

WSTM SITE COORDINATES
450491.60 FEET E
464023.05 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4051.0	874.7	8.4	5.9	94.0	1077.4	655.0	10.0	1.9	1.000284
4500.0	860.0	8.6	3.1	68.3	1059.8	655.0	22.3	1.8	1.000273
5000.0	844.3	8.8	4.9	77.7	1040.0	655.1	37.9	1.7	1.000273
5500.0	828.9	9.4	5.2	74.7	1017.8	656.2	53.3	1.8	1.000269
6000.0	813.9	9.1	3.8	69.6	1000.9	655.7	65.6	1.9	1.000261
6500.0	799.0	8.7	2.4	64.5	984.2	655.2	54.8	1.1	1.000254
7000.0	786.5	8.3	.9	59.4	967.9	654.6	.0	.8	1.000247
7500.0	770.2	7.9	-.6	54.9	951.9	654.1	334.3	2.2	1.000240
8000.0	755.0	7.2	-1.5	53.7	936.8	653.2	349.4	3.7	1.000235
8500.0	742.1	6.5	-2.4	52.6	921.9	652.4	7.3	5.7	1.000230
9000.0	728.5	5.9	-3.4	51.4	907.3	651.5	19.1	7.8	1.000225
9500.0	716.1	5.2	-4.3	50.3	892.9	650.7	27.1	9.7	1.000221
10000.0	701.9	4.5	-5.2	49.2	878.7	649.9	33.9	11.1	1.000216
10500.0	688.9	3.4	-6.0	50.4	865.0	648.5	39.3	12.5	1.000212
11000.0	676.0	2.2	-6.7	52.0	853.7	647.1	45.6	13.4	1.000209
11500.0	663.4	.9	-7.4	53.6	841.6	645.6	50.7	14.3	1.000205
12000.0	650.9	-.3	-7.8	57.7	829.8	644.1	54.2	14.8	1.000202
12500.0	638.6	-1.7	-7.8	62.8	817.7	642.6	55.9	15.5	1.000200
13000.0	626.5	-3.0	-8.0	68.0	805.1	641.0	55.3	16.3	1.000197
13500.0	614.6	-4.3	-8.3	73.1	794.7	639.5	53.0	16.8	1.000194
14000.0	602.9	-5.5	-8.4	73.8	783.2	638.0	50.1	17.2	1.000190
14500.0	591.2	-6.6	-11.4	68.8	771.6	636.5	44.7	17.9	1.000186
15000.0	579.8	-7.8	-13.4	63.8	760.1	635.1	39.0	18.9	1.000181
15500.0	568.6	-8.9	-15.5	58.7	748.9	633.6	34.8	17.7	1.000177
16000.0	557.5	-10.2	-16.0	62.0	737.7	632.1	31.8	18.0	1.000174
16500.0	546.6	-11.5	-16.4	66.8	726.8	630.6	31.4	20.2	1.000171
17000.0	535.9	-12.7	-17.0	70.2	716.0	629.0	31.5	21.5	1.000169
17500.0	525.3	-14.0	-19.6	62.2	705.4	627.5	32.2	22.4	1.000164
18000.0	514.9	-13.4	-32.7	18.5	690.4	627.9	32.1	23.4	1.000156
18500.0	504.7	-13.8	-31.7	20.2	677.7	627.5	31.4	24.6	1.000153

STATION ALTITUDE 4061.00 FEET MSL
15 OCT. 76 0805 HRS MDT
ACCESSION NO. 715

UPPER AIR DATA
2690C031F
JALLEN

TABLE VI (CONT)

WSTM SITE COORDINATES
450491.60 FEET E
4840?7.0F FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	DEWPOINT	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
19000.0	484.6	-14.6	-21.9	21.3	660.2	626.5	29.9	25.5	1.000151
19500.0	484.5	-15.7	-32.6	21.8	655.5	625.2	29.1	26.3	1.000148
20000.0	474.9	-16.8	-33.3	22.3	645.2	623.8	28.4	25.9	1.000146
20500.0	465.3	-17.9	-34.0	22.9	635.0	622.4	29.2	25.2	1.000143
21000.0	455.9	-19.1	-34.7	23.4	624.9	621.1	30.4	25.6	1.000141
21500.0	446.7	-20.2	-35.5	23.9	615.0	619.7	31.5	26.2	1.000139
22000.0	437.7	-21.3	-36.2	24.5	605.3	618.3	30.8	27.1	1.000136
22500.0	428.9	-22.4	-37.0	25.0	595.8	616.9	30.1	28.0	1.000134
23000.0	420.3	-23.9	-37.7	26.5	587.0	615.1	29.1	28.9	1.000132
23500.0	411.3	-25.4	-38.5	28.0	578.3	613.3	28.6	30.2	1.000130
24000.0	402.8	-26.9	-39.3	29.5	569.8	611.4	28.7	32.1	1.000128
24500.0	394.4	-28.2	-40.1	30.4	560.7	609.8	27.8	33.3	1.000126
25000.0	386.0	-29.7	-41.0	30.9	551.4	608.4	25.7	33.4	1.000124
25500.0	377.9	-30.4	-41.8	31.5	542.2	607.0	23.3	33.6	1.000122
26000.0	369.9	-31.8	-42.7	32.0	533.3	605.6	20.6	34.0	1.000120
26500.0	362.0	-32.7	-43.6	32.6	524.5	604.1	20.2	35.0	1.000118
27000.0	354.4	-33.8	-44.5	32.6	515.7	602.8	21.7	36.7	1.000116
27500.0	346.7	-34.7	-45.8	31.0	506.5	601.6	25.5	38.2	1.000113
28000.0	339.2	-35.7	-47.2	29.3	497.5	600.4	30.8	39.9	1.000111
28500.0	331.9	-36.6	-48.5	27.6	488.7	599.2	34.3	41.9	1.000109
29000.0	324.7	-37.5	-49.9	25.7**	480.1	598.0	36.9	44.0	1.000107
29500.0	317.6	-38.3	-53.3	18.5**	471.0	597.1	36.5	45.6	1.000105
30000.0	310.7	-39.0	-57.9	11.3**	462.2	596.1	34.7	47.1	1.000103
30500.0	303.8	-39.8	-56.1	4.1**	453.5	595.2	33.0	48.8	1.000101
31000.0	297.2	-40.9			445.4	593.9	31.6	50.6	1.000099
31500.0	290.6	-42.0			438.0	592.2	31.6	51.8	1.000098
32000.0	284.1	-43.2			430.7	590.6	32.8	52.7	1.000096
32500.0	277.8	-44.6			423.4	589.0	32.9	51.1	1.000094
33000.0	271.6	-44.9			417.7	588.1	32.9	48.4	1.000092
33500.0	265.5	-44.4			404.2	589.3	28.5	45.5	1.000090

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

UPPER AIR DATA

STATION ALTITUDE [illegible] FEET MSL
16 OCT. 76 0805 HRS MDT
ASCENSION NO. 315

8900030315
JALLEN

WSTM SITE COORDINATES
450491.00 FEET E
464023.05 FEET N

TABLE VI (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
34000.0	259.5	-44.2			394.9	589.4	22.7	42.9	1.000088
34500.0	253.7	-44.6			386.7	588.9	18.1	40.6	1.000086
35000.0	248.0	-45.3			379.1	588.1	13.4	38.4	1.000084
35500.0	242.4	-46.1			371.9	587.0	9.1	37.2	1.000083
36000.0	236.9	-47.0			364.8	585.9	5.3	36.4	1.000081
36500.0	231.5	-47.8			357.8	584.8	2.8	36.1	1.000080
37000.0	226.2	-48.6			351.0	583.8	1.8	36.1	1.000078
37500.0	221.1	-49.3			344.1	582.9	1.1	34.3	1.000077
38000.0	216.0	-49.3			336.2	582.9	.6	30.6	1.000075
38500.0	211.1	-49.3			328.5	582.9	358.8	27.8	1.000073
39000.0	206.3	-49.8			321.7	582.3	355.6	26.0	1.000072
39500.0	201.5	-50.2			314.9	581.8	350.2	22.7	1.000070
40000.0	196.9	-50.8			308.4	580.9	340.5	18.5	1.000069
40500.0	192.2	-51.4			302.0	580.1	327.5	16.3	1.000067
41000.0	187.7	-52.0			295.8	579.3	313.6	16.1	1.000066
41500.0	183.4	-52.6			289.6	578.5	310.3	18.3	1.000065
42000.0	179.1	-53.2			283.6	577.8	313.4	21.8	1.000063
42500.0	174.9	-53.8			277.8	577.0	312.6	24.1	1.000062
43000.0	170.8	-54.4			272.0	576.2	309.8	25.6	1.000061
43500.0	166.8	-55.0			266.4	575.4	307.9	25.5	1.000059
44000.0	162.9	-55.6			260.9	574.6	306.5	23.8	1.000058
44500.0	159.1	-56.2			255.5	573.8	305.4	21.6	1.000057
45000.0	155.4	-56.8			250.2	573.0	304.7	18.8	1.000056
45500.0	151.8	-57.4			245.0	572.2	304.8	16.2	1.000055
46000.0	148.2	-57.7			239.8	571.8	299.0	15.6	1.000053
46500.0	144.7	-57.8			234.0	571.7	288.7	15.4	1.000052
47000.0	141.2	-58.0			228.0	571.5	277.2	18.0	1.000051
47500.0	137.8	-58.8			224.0	570.4	268.8	21.2	1.000050
48000.0	134.5	-59.6			219.4	569.3	266.7	22.3	1.000049
48500.0	131.2	-60.4			214.8	568.2	266.2	22.6	1.000048

UPPER AIR DATA
2890070315

STATION ALTITUDE 4051.00 FEET MSL
15 OCT. 76 0805 HRS MDT
ASCENSION NO. 115
JALLEN

WSTN SITE COORDINATES
450491.60 FEET E
464023.05 FEET N

TABLE VI (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
49000.0	129.1	-61.0			210.5	567.2	266.5	22.8	1.000047
49500.0	125.0	-62.0			205.2	566.1	267.7	22.9	1.000046
50000.0	122.0	-62.8			202.0	565.0	269.4	23.1	1.000045
50500.0	119.0	-63.6			197.9	563.9	272.7	23.8	1.000044
51000.0	116.1	-64.1			193.5	563.3	275.6	24.6	1.000043
51500.0	113.3	-64.3			189.0	562.9	277.1	24.4	1.000042
52000.0	110.5	-64.6			184.6	562.6	278.5	24.3	1.000041
52500.0	107.9	-64.9			180.3	562.2	278.5	23.2	1.000040
53000.0	105.2	-65.2			176.2	561.8	277.7	21.8	1.000039
53500.0	102.6	-65.2			171.9	561.8	277.5	19.9	1.000038
54000.0	100.1	-63.9			168.6	562.5	278.3	17.4	1.000037
54500.0	97.6	-64.3			162.8	563.0	279.3	15.0	1.000036
55000.0	95.2	-64.7			159.1	562.4	280.5	15.3	1.000035
55500.0	92.3	-65.1			155.5	561.9	281.7	15.7	1.000035
56000.0	90.6	-65.5			152.0	561.7	282.8	16.7	1.000034
56500.0	88.3	-66.0			148.5	560.8	283.7	18.1	1.000033
57000.0	86.2	-66.4			145.2	560.2	284.4	18.9	1.000032
57500.0	84.0	-66.8			141.9	559.6	284.0	17.2	1.000032
58000.0	82.0	-67.2			138.8	559.1	283.5	15.5	1.000031
58500.0	79.9	-67.6			135.5	558.6	282.6	13.5	1.000030
59000.0	78.0	-67.2			131.9	559.1	281.3	11.5	1.000029
59500.0	76.0	-66.8			128.4	559.6	278.8	9.8	1.000029
60000.0	74.2	-66.5			125.0	560.1	273.7	9.2	1.000028
60500.0	72.3	-66.1			121.7	560.6	267.9	8.6	1.000027
61000.0	70.5	-65.7			118.5	561.1	265.2	8.2	1.000026
61500.0	68.9	-65.2			115.3	561.7	263.2	7.9	1.000026
62000.0	67.1	-64.7			112.2	562.5	262.2	7.7	1.000025
62500.0	65.5	-64.3			109.2	563.2	263.5	7.7	1.000024
63000.0	63.9	-63.7			106.3	563.9	264.9	7.6	1.000024
63500.0	62.3	-63.1			103.4	564.6	263.0	7.9	1.000023

UPPER AIR DATA

STATION ALTITUDE 4671.00 FEET MSL
19 OCT. 76 0805 HRS MDT
ASCENSION NO. 315

289C030315
JALLEN

WSTM SITE COORDINATES
450491.60 FEET E
464023.05 FEET N

TABLE VI (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
64000.0	50.9	-62.6			100.3	565.3	260.6	8.4	1.000022
64500.0	50.3	-62.1			97.9	566.0	259.8	8.6	1.000022
65000.0	49.9	-61.9			95.7	566.6	261.3	8.5	1.000021
65500.0	49.5	-61.7			93.1	566.4	262.9	8.5	1.000021
66000.0	49.1	-61.9			90.9	566.3	262.9	8.8	1.000020
66500.0	48.8	-62.0			88.8	566.1	262.9	9.1	1.000020
67000.0	48.5	-62.1			86.7	565.9	265.7	9.7	1.000019
67500.0	48.2	-62.3			84.6	565.7	271.0	10.6	1.000019
68000.0	48.0	-62.4			82.6	565.6	275.5	11.6	1.000018
68500.0	48.3	-61.9			80.5	566.2	282.9	12.1	1.000018
69000.0	47.6	-61.4			78.3	566.9	289.6	12.7	1.000017
69500.0	46.9	-60.9			76.3	567.6	294.8	13.5	1.000017
70000.0	46.4	-60.4			74.3	568.3	294.3	14.5	1.000017
70500.0	44.3	-59.9			72.3	568.9	293.9	15.4	1.000016
71000.0	43.2	-59.4			70.5	569.6	293.1	16.2	1.000016
71500.0	42.2	-58.9			68.6	570.3	291.1	16.3	1.000015
72000.0	41.2	-58.4			66.8	570.9	289.2	16.5	1.000015
72500.0	40.2	-57.9			65.1	571.6	287.9	16.9	1.000014
73000.0	39.2	-57.4			63.4	572.3	288.1	17.6	1.000014
73500.0	38.3	-56.9			61.7	572.9	289.2	18.3	1.000014
74000.0	37.4	-56.7			60.2	573.2	287.8	18.8	1.000013
74500.0	36.5	-56.6			58.8	573.2	286.8	19.0	1.000013
75000.0	35.7	-56.6			57.4	573.2	285.9	19.3	1.000013
75500.0	34.9	-56.6			56.0	573.3	284.7	18.3	1.000012
76000.0	34.0	-56.6			54.7	573.3	282.9	16.2	1.000012
76500.0	33.2	-56.5			53.4	573.4	280.6	14.1	1.000012
77000.0	32.4	-56.5			52.1	573.4	275.5	12.7	1.000012
77500.0	31.7	-56.5			50.9	573.5	267.8	12.3	1.000011
78000.0	30.9	-56.4			49.7	573.5	259.7	12.1	1.000011
78500.0	30.2	-56.4			48.5	573.5	253.6	12.5	1.000011

STATION ALTITUDE 4051.00 FEET MSL
15 OCT. 76 0805 HRS MDT
ASCENSION NO. 315

UPPER AIR DATA
2890030315
JALLEN

WSTM SITE COORDINATES
450491.60 FEET E
464023.05 FEET N

TABLE VI (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
79000.0	29.5	-55.9			47.3	574.3	250.7	13.2	1.000011
79500.0	28.9	-55.1			46.0	575.2	248.0	13.9	1.000010
80000.0	28.1	-54.4			44.8	576.2	247.7	14.4	1.000010
80500.0	27.5	-53.7			43.6	577.1	251.1	14.4	1.000010
81000.0	26.8	-53.0			42.5	578.0	254.5	14.5	1.000009
81500.0	26.2	-52.3			41.3	579.0	257.3	14.6	1.000009
82000.0	25.6	-51.6			40.3	579.9	258.5	14.8	1.000009
82500.0	25.0	-50.9			39.2	580.8	259.6	15.0	1.000009
83000.0	24.4	-50.1			38.2	581.8	261.1	15.3	1.000008
83500.0	23.9	-49.6			37.2	582.5	264.4	16.1	1.000008
84000.0	23.3	-49.6			36.3	582.5	267.5	17.0	1.000008
84500.0	22.8	-49.5			35.5	582.6	270.3	17.9	1.000008
85000.0	22.3	-49.5			34.7	582.6	275.5	18.7	1.000008
85500.0	21.8	-49.4			33.9	582.7	280.3	19.7	1.000008
86000.0	21.3	-49.4			33.1	582.7	284.6	20.8	1.000007
86500.0	20.8	-49.4			32.4	582.8	284.5	21.3	1.000007
87000.0	20.3	-49.3			31.6	582.8	281.1	21.3	1.000007
87500.0	19.8	-49.3			30.9	582.9	277.8	21.5	1.000007
88000.0	19.4	-49.3			30.2	582.9	274.5	21.7	1.000007
88500.0	19.0	-49.3			29.5	582.9	268.5	21.4	1.000007
89000.0	18.5	-49.3			28.8	582.9	261.1	21.2	1.000006
89500.0	18.1	-49.2			28.2	583.0	253.7	21.4	1.000006
90000.0	17.7	-49.2			27.5	583.0	246.5	21.9	1.000006
90500.0	17.3	-49.2			26.9	583.0	243.5	21.8	1.000006
91000.0	16.9	-49.2			26.3	583.0	241.1	21.5	1.000006
91500.0	16.5	-49.2			25.7	583.0	238.7	21.3	1.000006
92000.0	16.1	-49.2			25.1	583.0	236.2	21.2	1.000006
92500.0	15.8	-49.2			24.5	583.1			1.000005
93000.0	15.4	-49.1			24.0	583.1			1.000005
93500.0	15.1	-49.1			23.4	583.1			1.000005

UPPER AIR DATA

STATION ALTITUDE 4051.00 FEET MSL
15 OCT. 7F 0805 HRS MDT
ASCENSION NO. 71F

[illegible]
JALLEN

WSTM SITE COORDINATES
450491.60 FEET E
464027.00 FEET N

TABLE VI (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
94000.0	14.7	-49.1			22.3	593.1			1.000005

STATION ALTITUDE 4051.00 FEET MSL
15 OCT. 76 0805 HRS MDT
ASCENSION NO. 315

MANDATORY LEVELS
2980030315
JALLEN

WSTM SITE COORDINATES
050491.80 FEET E
464023.06 FEET N

TABLE VII

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL.HUM.	WIND DATA	
		AIR	DEWPOINT	PERCENT	DIRECTION	SPEED
MILLIBARS	FEET	DEGREES CENTIGRADE			DEGREES(TN)	KNOTS
850.0	4816.	8.5	6.7	76.	32.1	1.7
800.0	9466.	8.7	2.5	65.	56.0	1.1
750.0	8215.	8.9	-1.9	53.	359.2	4.5
700.0	10068.	4.4	-5.4	49.	34.7	11.3
650.0	12032.	-.4	-7.7	58.	54.5	14.9
600.0	14113.	-5.8	-9.9	73.	48.9	17.2
550.0	16330.	-11.1	-16.3	65.	31.5	19.7
500.0	18717.	-14.0	-31.5	21.	31.0	25.2
450.0	21309.	-19.8	-35.2	24.	31.2	26.0
400.0	24137.	-27.4	-39.5	30.	28.7	32.7
350.0	27245.	-34.3	-45.3	32.	23.1	37.5
300.0	30737.	-40.2			32.2	49.8
250.0	34759.	-45.0			15.2	39.2
200.0	39581.	-50.4			347.5	21.3
175.0	42418.	-53.8			312.8	24.1
150.0	45638.	-57.7			304.2	15.9
125.0	49398.	-62.0			287.7	22.9
100.0	53866.	-63.9			278.3	17.4
80.0	58314.	-67.6			282.7	13.6
70.0	60964.	-65.6			264.6	8.1
60.0	64067.	-62.3			259.4	8.5
50.0	67763.	-62.4			275.4	11.6
40.0	72332.	-57.8			288.0	17.0
30.0	78317.	-56.4			252.9	12.6
25.0	82163.	-50.9			259.8	15.0
20.0	86957.	-49.3			279.0	21.4
15.0	93148.	-49.1				

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 6331.00 FEET MSL
15 OCT. 70 0805 HRS MDT
ASCENSION NO. 5

SIGNIFICANT LEVEL DATA
2870530005
RED RIO

NSTM SITE COORDINATES
525345.62 FEET E
866454.18 FEET N

TABLE VIII

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	DEWPOINT	REL.HUM. PERCENT
805.2	6331.9	5.1	3.1	87.0
786.2	8174.9	6.5	2.6	76.0
738.6	8659.1	0.3	-5.3	43.0
700.0	10076.7	2.9	-3.6	62.0
642.6	12350.1	-3.1	-5.7	82.0
600.0	14144.3	-6.9	-7.7	94.0
583.6	14834.3	-8.1	-11.2	78.0
575.4	15174.9	-9.6	-11.1	89.0
557.4	16000.5	-11.0	-11.9	93.0
554.2	16145.9	-11.4	-36.8	10.0
549.4	16366.5	-8.1	-34.2	10.0
500.0	18774.6	-14.0	-34.9	15.0
471.6	20193.1	-18.0	-35.9	19.0
439.6	21896.5	-21.7	-42.6	13.0
419.0	23062.7	-24.9	-40.8	21.0
400.0	24167.3	-27.4	-34.8	49.0
394.4	24500.7	-28.1	-41.2	27.0
384.0	25129.9	-29.5	-49.0	13.0
333.8	28365.3	-37.5		
300.0	30769.2	-41.6		
282.4	32110.1	-44.6		
267.0	33345.1	-44.9		
250.0	34784.6	-47.6		
241.0	35563.4	-46.9		
216.8	37868.8	-51.6		
208.2	38736.5	-50.3		
200.0	39578.8	-51.2		
162.6	43909.6	-57.5		
150.0	45646.0	-58.2		
135.2	47793.8	-59.6		

STATION ALTITUDE 4331.86 FEET MSL
15 OCT. 76 0805 HRS MDT
ASCENSION NO. 5

SIGNIFICANT LEVEL DATA
2890350005
REL RIO

NGTM SITE COORDINATES
525345.62 FEET E
686454.18 FEET N

TABLE VIII (CONT)

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT
125.2	49305.1	-63.0		
104.4	53029.9	-65.0		
100.0	53894.0	-65.3		
85.4	57042.4	-68.1		
70.0	61005.5	-65.8		
50.0	67801.8	-62.7		
46.2	69433.1	-57.0		
36.4	74385.2	-60.0		
30.0	78428.0	-54.4		
24.2	83015.1	-51.0		
20.0	87118.2	-51.0		
17.9	89502.7	-51.8		
12.7	96951.2	-46.8		

STATION ALTITUDE 6331.66 FEET MSL
15 OCT. 76 0805 HRS MDT
ASCENSION NO. 6

UPPER AIR DATA
28503E005
RED RIC

WITH SITE COORDINATES
525345.62 FEET E
666454.18 FEET N

TABLE IX

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
6331.9	605.2	5.1	3.1	87.0	1004.5	651.0	00.0	1.9	1.000261
6500.0	600.2	5.5	3.0	84.1	998.9	651.4	18.2	2.2	1.000259
7000.0	785.5	6.5	2.5	75.5	975.0	652.8	23.2	3.5	1.000253
7500.0	771.0	5.7	.5	65.7	957.7	652.4	13.4	5.1	1.000244
8000.0	756.5	6.4	-1.8	55.9	940.7	652.2	8.5	6.7	1.000236
8500.0	742.2	6.3	-4.4	46.1	924.1	652.0	9.5	8.2	1.000227
9000.0	727.3	5.5	-4.8	47.5	909.7	651.8	18.9	9.5	1.000224
9500.0	713.8	4.3	-4.1	54.1	896.5	651.7	22.8	11.1	1.000222
10000.0	702.5	3.1	-3.7	60.7	885.6	651.4	27.8	13.5	1.000220
10500.0	689.4	1.8	-3.9	65.6	871.2	651.0	31.8	15.9	1.000217
11000.0	676.4	.5	-4.3	70.0	859.0	650.2	37.6	18.9	1.000214
11500.0	663.7	-.8	-4.8	74.5	847.6	649.7	41.3	21.4	1.000211
12000.0	651.2	-2.2	-5.3	78.9	836.2	649.1	48.9	20.1	1.000207
12500.0	638.9	-3.4	-5.9	83.0	823.2	648.8	57.7	18.7	1.000204
13000.0	626.7	-4.5	-6.4	86.4	810.7	648.3	70.6	16.1	1.000200
13500.0	614.7	-5.6	-7.0	89.8	798.4	648.0	83.1	14.5	1.000197
14000.0	602.9	-6.6	-7.6	93.2	786.3	647.7	84.8	13.0	1.000194
14500.0	591.3	-7.5	-9.5	85.5	774.0	647.5	88.0	11.7	1.000188
15000.0	579.8	-8.8	-11.1	83.1	762.8	647.0	88.3	10.7	1.000184
15500.0	568.5	-10.1	-11.4	90.5	751.7	646.4	82.0	11.7	1.000181
16000.0	557.4	-11.0	-11.9	93.0	739.5	645.3	77.4	13.4	1.000178
16500.0	546.5	-8.4	-34.2	10.3	719.0	643.9	83.0	15.1	1.000162
17000.0	535.8	-9.7	-34.2	11.3	708.2	643.1	51.5	17.0	1.000160
17500.0	525.3	-10.9	-34.3	12.4	697.6	642.9	46.3	19.4	1.000157
18000.0	515.0	-12.2	-34.5	13.4	687.2	642.5	42.1	21.4	1.000155
18500.0	504.9	-13.4	-34.6	14.5	676.9	642.0	42.4	22.9	1.000153
19000.0	494.9	-14.7	-35.0	15.7	666.9	641.9	42.5	24.4	1.000150
19500.0	485.2	-16.1	-35.3	17.1	657.1	641.7	40.6	25.3	1.000148
20000.0	475.3	-17.5	-35.7	18.5	647.4	641.0	38.7	26.1	1.000146
20500.0	465.7	-18.7	-37.0	17.9	637.4	641.5	38.0	26.8	1.000143

STATION ALTITUDE 6331.00 FEET MSL
15 OCT. 76 0805 HRS MDT
ASCENSION NO. 6

UPPER AIR DATA
28703500DS
RED R10

USTM SIP COORDINATES
525313.22 FEET E
6864534.10 FEET N

TABLE IX (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
21000.0	456.3	-19.6	-36.9	10.2	627.2	626.2	37.4	27.5	1.000141
21500.0	447.0	-20.8	-40.9	14.4	617.1	616.7	37.9	28.7	1.000138
22000.0	437.9	-22.0	-42.3	13.7	607.3	607.4	38.3	30.0	1.000136
22500.0	428.9	-23.4	-41.4	17.1	597.1	615.8	38.4	31.6	1.000134
23000.0	420.1	-24.7	-40.8	20.9	587.0	614.1	38.5	33.3	1.000132
23500.0	411.4	-25.9	-37.6	32.1	577.5	612.7	38.7	35.6	1.000131
24000.0	402.8	-27.0	-35.4	44.6	570.0	611.3	38.8	36.1	1.000129
24500.0	394.4	-28.1	-41.2	27.0	560.6	609.7	38.9	40.1	1.000126
25000.0	386.1	-29.2	-47.0	15.9	551.4	608.5	38.9	42.2	1.000123
25500.0	377.9	-30.4	-50.8	11.5**	542.3	607.0	39.0	43.8	1.000121
26000.0	369.8	-31.7	-53.4	9.5**	533.4	605.4	40.5	45.5	1.000119
26500.0	361.9	-32.9	-56.3	7.5**	524.7	603.9	43.4	47.0	1.000117
27000.0	354.1	-34.1	-59.7	5.5**	516.1	602.3	46.3	48.5	1.000115
27500.0	346.5	-35.4	-64.0	3.5**	507.7	600.7	49.4	49.7	1.000113
28000.0	339.1	-36.6	-71.0	1.5**	499.4	599.2	51.6	51.0	1.000111
28500.0	331.8	-37.7			491.0	597.7	51.5	52.2	1.000109
29000.0	324.6	-38.8			482.8	596.1	50.8	53.3	1.000107
29500.0	317.4	-39.9			474.1	595.0	47.8	54.3	1.000105
30000.0	310.4	-40.3			464.4	594.5	44.8	55.2	1.000103
30500.0	303.6	-41.1			455.9	593.4	41.2	55.5	1.000102
31000.0	296.9	-42.1			447.7	592.2	38.1	55.9	1.000100
31500.0	290.3	-43.2			439.8	590.7	36.9	55.8	1.000098
32000.0	283.8	-44.4			432.1	589.3	35.7	55.3	1.000096
32500.0	277.4	-44.7			423.1	588.8	35.0	54.5	1.000094
33000.0	271.2	-44.8			413.6	588.7	35.2	53.6	1.000092
33500.0	265.1	-45.2			405.1	588.2	33.1	52.8	1.000090
34000.0	259.1	-46.1			397.6	587.8	30.9	52.2	1.000089
34500.0	253.3	-47.1			390.3	585.8	28.7	48.7	1.000087
35000.0	247.5	-47.4			382.0	585.3	26.1	44.7	1.000085
35500.0	241.9	-47.0			372.6	585.9	21.4	39.8	1.000083

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 6351.86 FEET MSL
15 OCT. 76 0805 HRS MDT
ASCENSION NO. 5

UPPER AIR DATA
26703500US
RED RIO

WSTM SITE COORDINATES
526345.02 FEET E
0664548.18 FEET N

TABLE IX (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
36000.0	236.4	-47.8			365.4	584.9	14.0	35.0	1.000081
36500.0	231.0	-48.0			356.8	583.5	9.5	33.8	1.000080
37000.0	225.7	-49.5			352.1	582.2	6.4	35.0	1.000078
37500.0	220.5	-50.8			345.8	580.9	3.9	35.8	1.000077
38000.0	215.5	-51.7			338.3	579.1	2.7	35.2	1.000075
38500.0	210.5	-50.7			329.6	581.1	1.8	34.5	1.000073
39000.0	205.7	-50.6			321.7	581.2	357.5	29.7	1.000072
39500.0	200.9	-51.1			315.2	580.5	351.3	24.9	1.000070
40000.0	196.2	-51.8			308.8	579.8	347.5	22.8	1.000069
40500.0	191.8	-52.5			302.8	579.1	343.7	20.8	1.000067
41000.0	187.2	-53.2			296.5	577.7	338.0	19.7	1.000066
41500.0	182.8	-53.9			290.5	576.8	331.3	19.0	1.000065
42000.0	178.5	-54.7			284.8	575.9	322.4	18.7	1.000063
42500.0	174.3	-55.4			278.9	574.9	310.1	19.4	1.000062
43000.0	170.2	-56.1			273.2	573.9	299.1	20.9	1.000061
43500.0	166.3	-56.8			267.7	573.0	290.0	22.2	1.000060
44000.0	162.4	-57.5			262.3	572.1	283.9	23.4	1.000059
44500.0	158.5	-57.7			256.3	571.8	282.3	23.3	1.000057
45000.0	154.7	-57.9			250.5	571.5	280.7	22.2	1.000056
45500.0	151.1	-58.1			244.7	571.2	288.5	21.2	1.000055
46000.0	147.6	-58.5			239.3	570.8	284.8	20.7	1.000053
46500.0	144.9	-58.8			234.0	570.3	281.0	20.3	1.000052
47000.0	140.3	-59.2			228.8	569.8	279.5	20.6	1.000051
47500.0	137.1	-59.6			223.7	569.3	278.6	21.0	1.000050
48000.0	133.9	-60.2			219.0	568.5	277.9	21.4	1.000049
48500.0	130.8	-61.2			214.7	567.4	277.7	21.6	1.000048
49000.0	127.5	-62.3			210.5	566.8	277.4	21.9	1.000047
49500.0	124.4	-63.1			206.3	566.0	277.8	22.4	1.000046
50000.0	121.3	-63.5			201.5	566.2	278.2	23.0	1.000045
50500.0	118.4	-63.8			196.9	565.7	279.1	23.6	1.000044

STATION ALTITUDE 5331.00 FEET MSL
15 OCT. 76 0805 HRS MDT
ASCENSION NO. 5

UPPER AIR DATA
2690350005
RED RIO

USTM SITE COORDINATES
525345.02 FEET E
0004S4.18 FEET N

TABLE IX (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CU.M	SPEED OF SOUND METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
51000.0	115.5	-64.2			192.4	565.2	280.5	24.3	1.000043	
51500.0	112.6	-64.5			186.1	564.7	281.8	25.1	1.000042	
52000.0	109.5	-64.9			183.8	564.2	281.2	25.3	1.000041	
52500.0	107.2	-65.2			179.6	563.6	280.7	25.0	1.000040	
53000.0	104.6	-65.6			175.5	563.1	280.0	24.9	1.000039	
53500.0	102.0	-65.9			171.6	562.5	279.8	22.9	1.000038	
54000.0	99.5	-65.4			166.8	561.5	277.5	20.9	1.000037	
54500.0	97.0	-65.8			163.0	560.9	275.0	19.4	1.000036	
55000.0	94.6	-66.3			159.3	560.3	271.9	17.9	1.000035	
55500.0	92.3	-66.7			155.7	559.7	269.0	17.1	1.000035	
56000.0	90.0	-67.2			152.2	559.1	267.7	17.9	1.000034	
56500.0	87.8	-67.6			148.7	558.5	268.6	18.6	1.000033	
57000.0	85.6	-68.1			145.4	557.9	269.4	18.9	1.000032	
57500.0	83.5	-67.6			141.6	556.2	269.1	19.0	1.000032	
58000.0	81.4	-67.5			137.9	556.0	268.0	19.1	1.000031	
58500.0	79.4	-67.3			134.3	559.0	268.3	17.5	1.000030	
59000.0	77.4	-67.0			130.8	557.4	267.4	15.7	1.000029	
59500.0	75.5	-66.7			127.4	559.6	267.4	14.0	1.000028	
60000.0	73.6	-66.4			124.0	560.2	268.1	12.8	1.000028	
60500.0	71.8	-66.1			120.8	560.6	268.9	11.6	1.000027	
61000.0	70.0	-65.8			117.6	561.0	269.1	10.6	1.000026	
61500.0	68.3	-65.6			114.6	561.5	268.4	10.5	1.000026	
62000.0	66.6	-65.3			111.7	561.6	267.6	10.2	1.000025	
62500.0	65.0	-65.1			108.9	561.9	266.1	9.5	1.000024	
63000.0	63.4	-64.9			106.1	562.2	264.2	8.7	1.000024	
63500.0	61.9	-64.7			103.4	562.5	260.6	8.0	1.000023	
64000.0	60.4	-64.4			100.7	562.8	260.0	8.1	1.000022	
64500.0	58.9	-64.2			98.2	563.1	271.1	8.4	1.000022	
65000.0	57.4	-64.0			95.7	563.4	275.9	8.0	1.000021	
65500.0	56.0	-63.7			93.2	563.7	277.9	9.2	1.000021	

STATION ALTITUDE 6331.00 FEET MSL
15 OCT. 70 0805 HRS MDT
ASCENSION NO. 5

UPPER AIR DATA
28YD350005
RED RIO

WSTN SITE COORDINATES
025315.02 FEET E
0004514.10 FEET N

TABLE IX (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
60000.0	54.7	-63.5			90.8	565.1	279.6	9.7	1.000020
60500.0	53.3	-63.3			88.5	564.4	281.2	10.2	1.000020
61000.0	52.0	-63.1			86.3	564.7	282.7	10.9	1.000019
61500.0	50.8	-62.8			84.1	565.0	284.0	11.7	1.000019
62000.0	49.5	-62.5			81.7	566.1	285.1	12.4	1.000018
62500.0	48.3	-60.3			79.1	566.4	286.4	11.7	1.000018
63000.0	47.2	-58.5			76.6	570.8	288.0	10.7	1.000017
63500.0	46.1	-57.0			74.2	572.7	289.9	9.8	1.000017
64000.0	45.0	-57.3			72.6	572.3	289.5	9.6	1.000016
64500.0	43.9	-57.6			70.9	571.9	287.7	9.8	1.000016
65000.0	42.8	-57.9			69.4	571.5	286.0	10.0	1.000015
65500.0	41.8	-58.3			67.8	571.1	284.5	10.8	1.000015
66000.0	40.8	-58.6			66.3	570.7	283.3	12.2	1.000015
66500.0	39.9	-58.9			64.8	570.3	282.3	13.7	1.000014
67000.0	38.9	-57.2			63.3	569.9	281.4	14.4	1.000014
67500.0	38.0	-57.5			61.9	569.5	279.5	14.8	1.000014
68000.0	37.1	-57.8			60.5	569.1	277.6	14.8	1.000013
68500.0	36.2	-59.8			59.1	569.0	275.7	14.5	1.000013
69000.0	35.3	-59.1			57.5	569.9	274.0	14.7	1.000013
69500.0	34.5	-58.5			56.0	570.8	272.4	14.9	1.000012
70000.0	33.7	-57.8			54.5	571.7	270.8	15.0	1.000012
70500.0	32.9	-57.1			53.0	572.7	270.0	15.2	1.000012
71000.0	32.1	-56.4			51.6	573.6	270.3	15.4	1.000011
71500.0	31.4	-55.7			50.2	574.5	270.6	15.6	1.000011
72000.0	30.6	-55.0			48.9	575.4	270.9	15.8	1.000011
72500.0	29.9	-54.3			47.6	576.3	269.8	15.9	1.000011
73000.0	29.2	-54.0			46.4	576.8	268.6	16.0	1.000010
73500.0	28.5	-53.6			45.3	577.2	267.4	16.2	1.000010
74000.0	27.9	-53.2			44.1	577.7	266.6	16.3	1.000010
74500.0	27.2	-52.9			43.1	578.2	266.5	16.3	1.000010

STATION ALTITUDE 6331.00 FEET MSL
13 OCT. 70 0805 HRS MDT
ASCENSION NO.

UPPER AIR DATA
ZRY,355005
RED R10

WSTN SITE COORDINATES
325345.62 FEET E
086454.18 FEET N

TABLE IX (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	RELATIVE HUMIDITY PERCENT	DENSITY RATIO	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
61000.0	20.6	-52.5			.92.0	570.7	266.3	16.3	1.000009
61500.0	20.0	-52.1			40.7	577.2	266.2	16.3	1.000009
62000.0	19.4	-51.8			39.9	577.7	265.1	16.3	1.000009
62500.0	18.8	-51.4			38.7	578.2	263.9	16.3	1.000009
63000.0	18.2	-51.0			38.0	578.8	262.8	16.4	1.000008
63500.0	17.7	-51.0			37.1	579.7	261.5	16.5	1.000008
64000.0	17.1	-51.0			36.3	580.7	260.7	16.8	1.000008
64500.0	16.6	-51.0			35.4	580.7	259.9	17.1	1.000008
65000.0	16.1	-51.0			34.6	580.7	259.1	17.4	1.000008
65500.0	15.6	-51.0			33.8	580.7	258.3	17.7	1.000008
66000.0	15.1	-51.0			33.0	580.7	256.8	17.8	1.000007
66500.0	14.6	-51.0			32.3	580.7	255.3	17.9	1.000007
67000.0	14.1	-51.0			31.5	580.7	253.8	18.0	1.000007
67500.0	13.6	-51.1			30.8	580.3	252.4	18.1	1.000007
68000.0	13.2	-51.3			30.1	580.3	251.1	19.0	1.000007
68500.0	12.8	-51.5			29.5	580.0	249.9	19.9	1.000007
69000.0	12.3	-51.8			28.8	579.0	248.8	20.8	1.000006
69500.0	11.9	-51.8			28.2	579.0	247.8	21.7	1.000006
70000.0	11.5	-51.5			27.5	580.0	246.8	23.5	1.000006
70500.0	11.1	-51.1			26.8	580.5	245.9	25.3	1.000006
71000.0	10.7	-50.8			26.2	580.9	245.2	27.2	1.000006
71500.0	10.3	-50.5			25.5	581.4	244.5	29.0	1.000006
72000.0	10.0	-50.1			24.9	581.8	243.5	30.7	1.000006
72500.0	9.6	-49.8			24.3	582.2	242.4	32.3	1.000005
73000.0	9.2	-49.5			23.7	582.7	241.5	34.0	1.000005
73500.0	8.9	-49.1			23.2	583.1	240.7	35.7	1.000005
74000.0	8.5	-48.8			22.6	583.5			1.000005
74500.0	8.2	-48.4			22.0	584.0			1.000005
75000.0	7.9	-48.1			21.5	584.4			1.000005
75500.0	7.6	-47.8			21.0	584.9			1.000005

STATION ALTITUDE 5351.00 FEET M.S.L.
15 OCT. 76 0805 HRS MDT
ASCENSION NO. 5

UPPER AIR DATA
28703500005
RED AIR

SYSTEM SITE COORDINATES
523545.82 FEET E
0004594.18 FEET N

TABLE IX (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	DEWPOINT DEGREES CENTIGRADE	RELATIVE HUMIDITY PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
96000.0	13.5	-47.4			20.5	563.5			1.000005
96500.0	13.0	-47.1			20.0	565.7			1.000004

STATION ALTITUDE [illegible] FEET MSL
15 OCT. 76 0805 HRS MDT
ASCENSION NO. [illegible]

MANDATORY LEVELS
[illegible]
[illegible] RED RIB

WSTM SITE COORDINATES
[illegible] FEET E
[illegible] FEET N

TABLE X

PRESSURE MILLIBARS	PRESSURE DENSITY ALT FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS
800.0	6361.	5.5	3.0	89.	95.8	2.2
750.0	8243.	8.3	-3.0	51.	0.0	7.8
700.0	10091.	2.9	-3.0	82.	28.5	13.9
650.0	12043.	-2.3	-5.4	79.	99.7	20.0
600.0	14114.	-5.9	-7.7	79.	35.2	12.6
550.0	16327.	-8.5	-34.6	10.	97.6	17.5
500.0	18725.	-14.0	-34.9	15.	92.4	23.0
450.0	21319.	-20.5	-40.3	15.	97.7	20.3
400.0	24135.	-27.4	-34.6	99.	30.8	30.0
350.0	27243.	-34.8	-51.7	4.**	98.0	44.1
300.0	30717.	-41.6			95.3	55.2
250.0	34720.	-47.6			47.3	40.4
200.0	39510.	-51.2			350.1	24.2
175.0	42338.	-55.3			341.9	19.2
150.0	45530.	-58.2			287.5	21.1
125.0	49274.	-63.0			277.7	22.3
100.0	53746.	-65.3			277.6	21.4
80.0	58166.	-67.3			261.8	10.1
70.0	60817.	-65.8			259.1	10.0
60.0	63899.	-64.4			267.0	8.2
50.0	67574.	-62.7			264.7	12.1
40.0	72173.	-58.6			282.5	13.4
30.0	78123.	-59.4			276.0	15.7
25.0	81981.	-51.5			264.4	10.3
20.0	86747.	-51.0			253.5	18.0
15.0	92869.	-49.2			291.0	35.0

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.